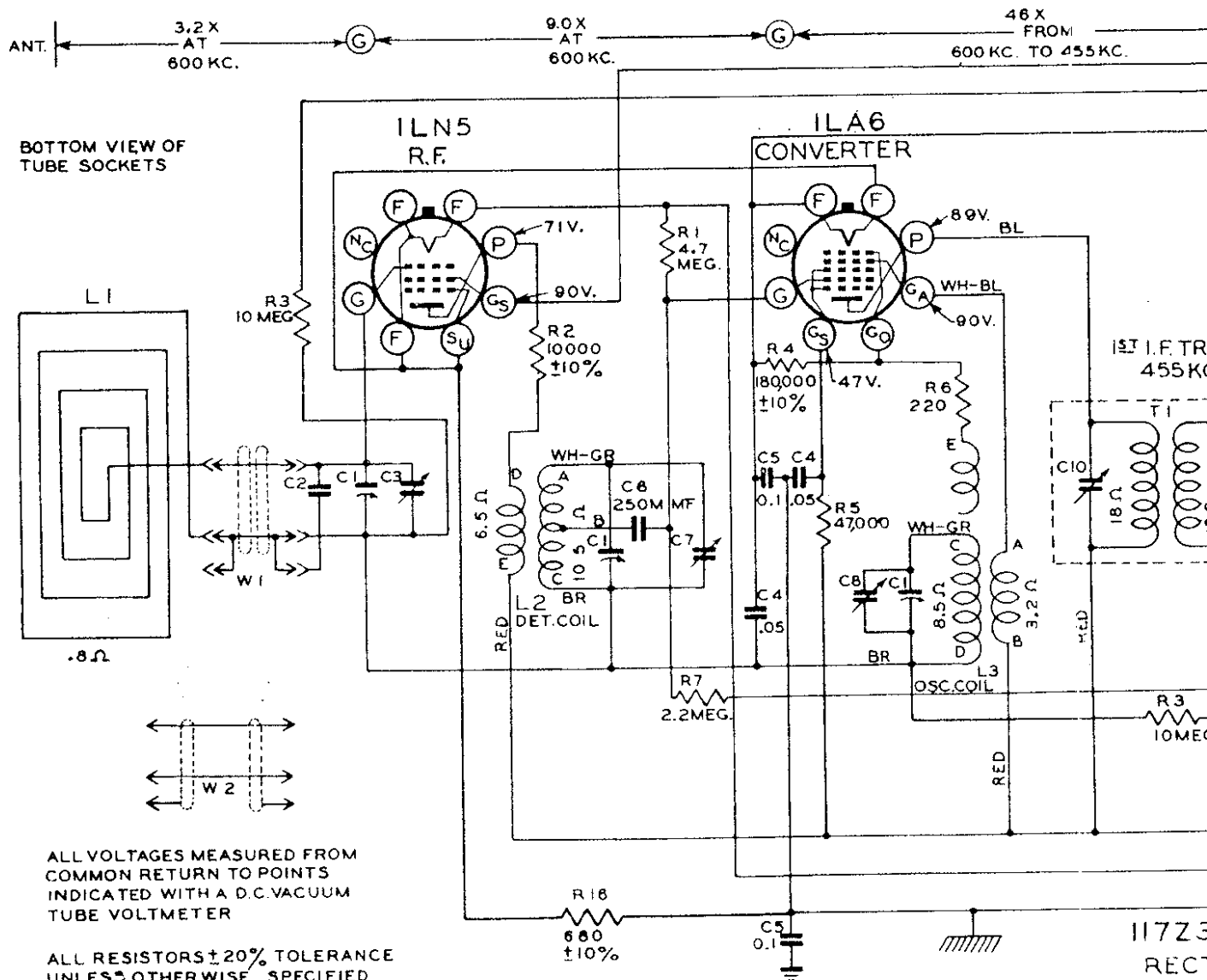
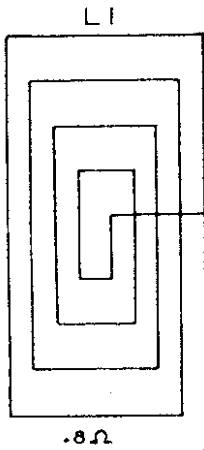


12-7,8



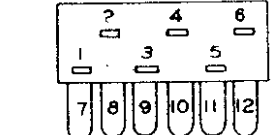
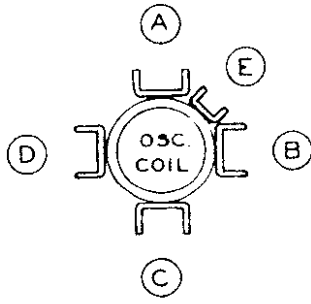
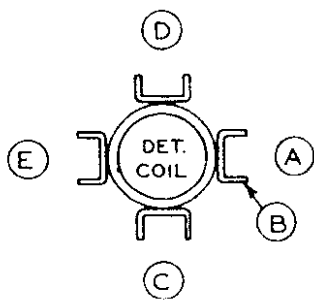
BOTTOM VIEW OF TUBE SOCKETS



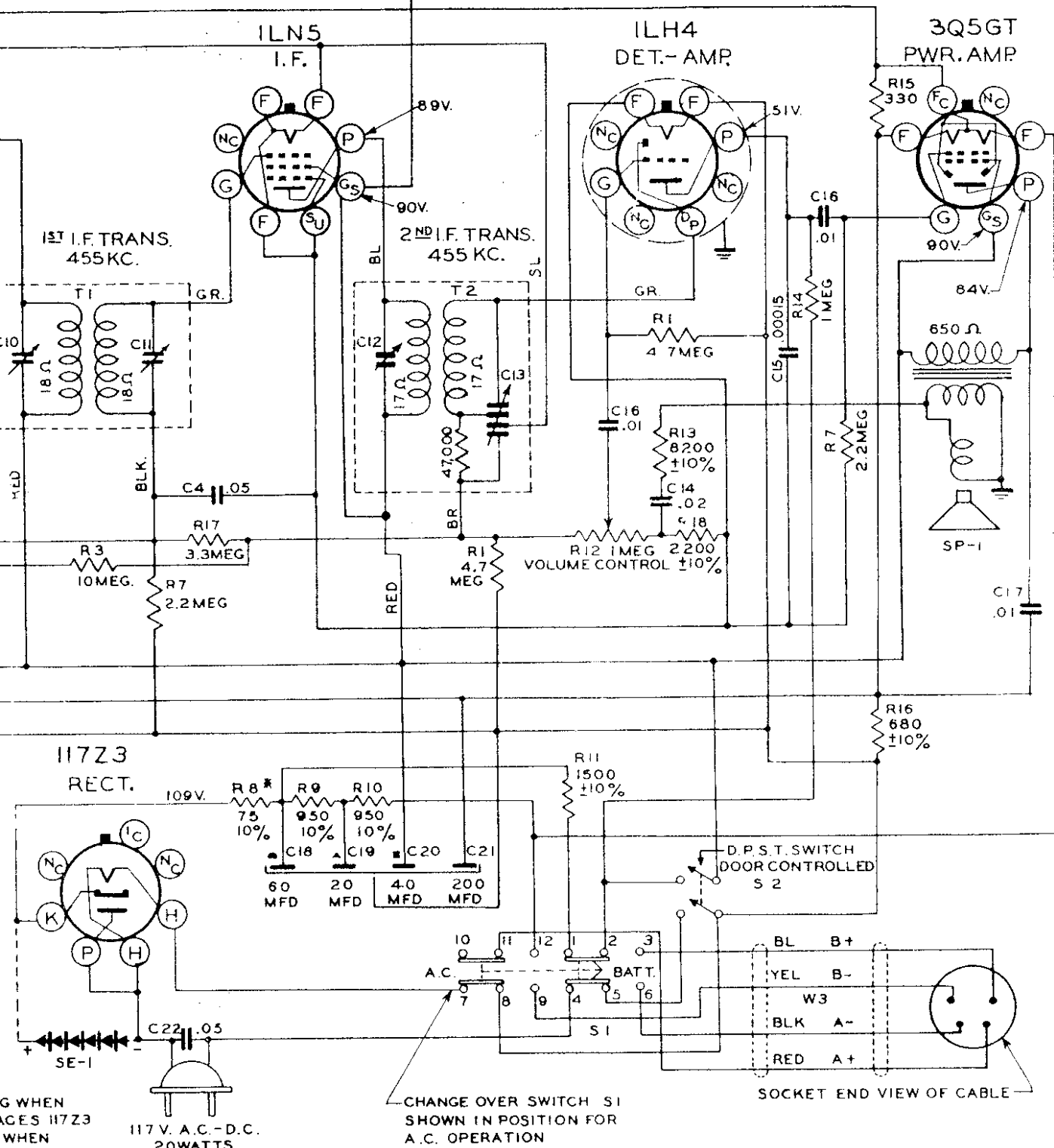
ALL VOLTAGES MEASURED FROM COMMON RETURN TO POINTS INDICATED WITH A D.C. VACUUM TUBE VOLTMETER

ALL RESISTORS ±20% TOLERANCE UNLESS OTHERWISE SPECIFIED

I.F. FREQUENCY 455 KC.
TUNING RANGE 535-1620 KC.
BATTERY PACK NO. Z909



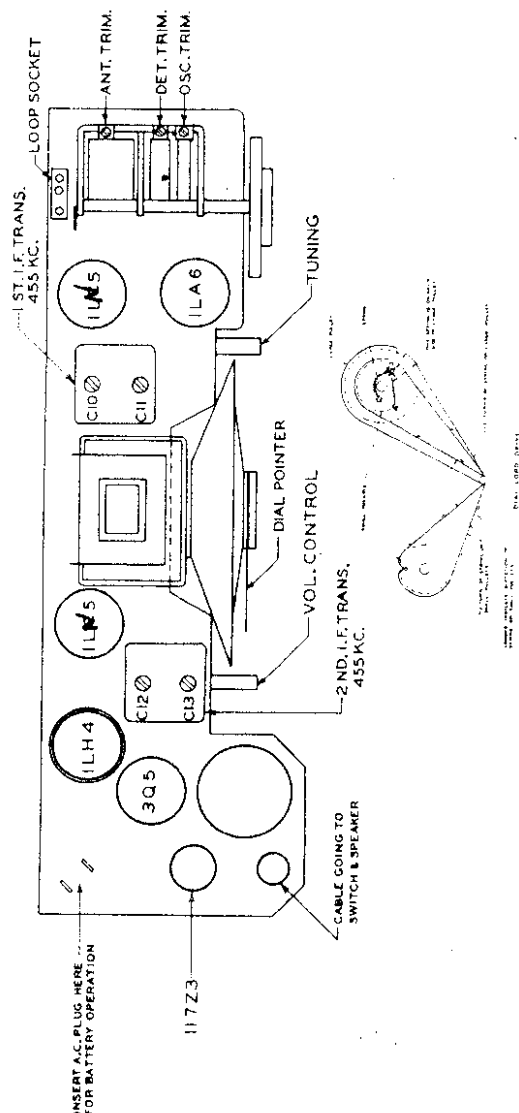
NOTE: DOTTED LINES SHOW WIRING WHEN SELENIUM RECTIFIER REPLACES 117Z3
R8 BECOMES 140 OHMS ±10% WHEN SELENIUM RECTIFIER IS USED



⏏ DENOTES CHASSIS

⏏ DENOTES COMMON RETURN (B-)

WHEN USES 117Z3 WHEN
117V. A.C.-D.C. 20WATTS



TUBE, TRIMMER LOCATION AND DIAL CABLE DRAWING

ALIGNMENT PROCEDURE

OPERATION	CONNECT OSCILLATOR TO	DUMMY ANTENNA	INPUT SIG. FREQUENCY	BAND	SET DIAL TO	TRIMMERS	PURPOSE
1	Converter Grid	.1 Mfd	455 Kc.	BC	600 Kc.	C-10-11-12-13	I. F. Alignment
2	Two turns loosely coupled to Wavemagnet		1600 Kc.	BC	1600 Kc.	Osc. Trim.	Set Oscillator to scale
3	Two turns loosely coupled to Wavemagnet		1400 Kc.	PC	1400 Kc.	Det. Trim.	Align Det.
4	Two turns loosely coupled to Wavemagnet		1400 Kc.	LC	1400 Kc.	Ant. Trim.	Align Wavemagnet

The 6E40 chassis is an AC, DC or battery operated superheterodyne circuit with a stage of RF amplification. The chassis is isolated from the DC circuit, and all measurements must be made from a common negative point. The most convenient place to reach this negative point is the terminal strip to which C5 is connected. The DC resistance from chassis to any circuit must be almost infinite. If any circuit becomes grounded a hum will appear. Microphonic tubes will cause audio howl. Check 1LA6.

The wavemagnet is connected to the chassis with a two wire cable. If the R.F. becomes weak or dead, check the D.C. resistance of the wavemagnet and connecting cable. This D.C. resistance should be approximately 1.75 ohms. If it is open check the cable and wavemagnet.

IF Alignment: Remove the chassis from the cabinet and arrange the units so that the wavemagnet can be plugged in. All the connections and adjustments can be made from the top of the chassis. Connect a signal generator, through a .1 mfd. dummy antenna, to the lug on top of the center section of the gang condenser (converter grid) and condenser gang frame. Connect an output meter across the voice coil of the speaker (two lugs provided). Set the signal generator to 455 Kc. and adjust C10, C11, C12 and C13 for maximum indication on the output meter. Always keep the signal output from the generator just high enough to get an indication, otherwise excessive loading may result. Remove the signal generator leads from the gang.

RF Alignment: Connect a two turn loop across the leads of the signal generator, loosely couple this loop to the wavemagnet. Set the signal generator and the dial pointer of the receiver to 1600 Kc. and adjust oscillator trimmer to resonance. Set the signal generator and dial pointer to 1400 and adjust detector trimmer and antenna trimmer to resonance. These trimmers are on the top of gang condenser. Check operation and re-install set in cabinet. Tune in a weak station near 1400 Kc. or use background noise and readjust antenna trimmer for maximum sensitivity.

MISCELLANEOUS--Continued

93-35	.032 x .144 x 3/8" Steel Washer - N.P.	
93-125	#6 Int. Shk.-proof Lockwasher #1206	
93-126	#8 Int. Shk.-proof Lockwasher #1208	
93-179	.031 x .140 x 5/16" Steel Washer - Cad. Pl.	
93-282	Fibre Shoulder Washer	
93-321	Fibre Washer (used on S-2-475)	
93-325	1/16" x .127 x 5/16" Fibre Washer	
93-609	.015 x .134 x 1/2" Steel Washer - N.P.	
93-721	Black Felt Washer (used on 80-603)	
93-906	Black Felt Washer (used on 80-603)	
93-911	Spring Washer (4 used)	
93-912	.010 x 9/64" x 5/16" Steel Washer N.P.	
93-913	.020 x .192 x 5/16" Steel Washer - Black Zinc Finish.	
94-295	Condenser Mounting Bushing.	
110-131	Grille Cloth.	
112-713	#4-40 x 1/2" Rd. Phillips Hd. M.S. (Lockwasher attached).	
112-714	#4 x 1/2" Flat Hd. Self Tapping Screw (2 used)	
114-26	#8 x 1/2" Hex. Hd. Self Tapping Screw (6 used)	
114-48	#6-32 x 1/2" Hex. Acorn Hd. M.S. - Steel - N.P.	
114-50	#8-32 x 1/2" Hex. Acorn Hd. M.S. - Steel - N.P.	
114-248	#6-20 x 3/16" Hex. Hd. Slotted Self Tapping Screw (6 used)	
114-251	#10-32 x 3/8" Hex. Washer Hd. Slotted M. Screw (2 used)	
114-291	#8-32 x 7/16" Hex. Hd. Slotted M.S. - Steel - N.P.	
114-298	#6-32 x 3/8" Hex. Hd. Slotted M.S. (Lockwasher attached) (4 used)	
125-17	Rubber Grommet (3 used)	
125-26	Rubber Grommet (4 used)	
125-39	Rubber Grommet (2 used)	
125-572	Wave magnet Shield (used on S-14563)	
126-573	Tube Shield	
139-72	Speaker Buffer.	
159-49	Snap Button	
159-57	Snap Button (2 used on S-14563)	
197-18	Rubber Suction Cup (used on S-14563)	
197-22	Rubber Suction Cup (used on S-14563)	
199-83	Flexible Handle Sleeve	
202-589	Instruction Book.	
212-3	Selenium Rectifier.	
S-14412	Cabinet Frame Assembly	
S-14414	Cabinet Door Latch, Release Knob & Spring Assembly.	
S-14416	Switch Mounting Bracket & Lever Assembly.	
S-14417	Cabinet Front Cover Assembly.	
S-14420	Cabinet Rear Cover & Rivet Assembly.	
S-14421	Handle Strap Assembly	
S-14422	Wave magnet Assembly	
S-14424	Cover Strip & Latch Bar Assembly.	
S-14563	Wave magnet Shield Assembly.	

SE-1

MISCELLANEOUS

11-104	Line Cord & Plug - 7 ft.	
15-51	Plug Cap & Insulator	
17-103	Battery Cable Clamp	
24-458	Switch Cover.	
28-23	Cabinet Door (R.H.)	
28-24	Cabinet Door (L.H.)	
40-74	Door Hinge (4 used)	
40-78	Cabinet Rear Cover Hinge (2 used on S-14412)	
43-159	Handle End Piece (2 used)	
46-731	Door Release Knob	
46-732	Tuning & Volume Control Knob (2 used)	
49-631	P.M. Speaker (5 1/2")	SP-1
52-475	206-631 Output Transformer.	W1
52-476	208-631 Cone & Voice Coil.	W2
54-30	Wave magnet Cable.	
54-30	Wave magnet Extension Cable.	
54-139	#8-32 x 5/16" Hex. Nut - Steel - N.P.	
54-141	#3/8" x 32 x 9/16" Nut - Cad. 52-475)	
54-211	Timmerman Speed Nut (8 used on S-14417)	
54-263	Spring Nut (used on 80-603)	
54-263	Speed Nut (used on 80-603)	
54-267	#6-32 x 5/16" Nut - Steel - N.P.	
56-236	Hinge Pin (4 used) (2 on 28-23) (2 on 28-24)	
57-1360	Chassis Front Plate	
57-1384	Chassis Cover Plate	
73-35	#6-32 x 3/16" Hex. Hd. Slotted Set Screw. Cup point.	
78-274	Socket - Electrolytic Capacitor.	
78-488	Socket - Loktal Tube	
78-543	Socket - Battery Cable (4 Contact)	
78-556	Socket - Loktal Tube (or 78-762) (8 Contact)	
78-781	Socket - Miniature Tube	
78-801	Socket - Octal Tube	
78-802	Socket - Wave magnet Plug (3 Contact)	
80-597	Door Release Knob Spring.	
80-598	Door Catch Spring	
80-599	Cover Catch Spring (2 used on S-14417)	
80-600	Door Hinge Retaining Spring (2 used on S-14417)	
80-601	Lock Lever Spring (Used on S-14424)	
80-602	Latch Bar Spring (used on S-14424)	
80-603	Wave magnet Release Spring	
80-626	Pressure Spring (2 used on S-14424)	
80-629	Link Lever Spring	
81-148	Rubber Strip (Handle)	
81-1487	Chassis Insulating Strip	
83-1510	Gang Condenser Shield Strip (used with 22-1352)	
83-1512	Rubber Strip (Handle)	
83-1524	Wave magnet Cable Spacer Strip	
83-1525	Wave magnet Cable Spacer Strip	
83-1531	Cushion Strip	
85-371	Buttly Change-Over Switch.	S1
85-426	D.P.S.T. Switch	S2

DESCRIPTION

DIAL ASSEMBLY

25-399	Lower dial.	
54-262	Speed nut (4 used on 26-399)	
76-500	Tuning Control Shaft.	
80-69	Dial Cord Tension Spring.	
80-209	Dial Cord	
168-32	Retaining Ring (76-500)	
168-75	Retaining Ring (S-13629)	
S-13829	Dial Pointer & Pulley Assembly (59-201)	
S-13830	Condenser Pulley & Bushing Assembly.	
S-13838	Pulley Mtg. Bracket & Stud Assembly.	
S-14407	Dial Cord & Eyelet Assembly (Long)	
S-14406	Dial Cord & Eyelet Assembly (Short)	

COILS AND CHOKES

T1	1st I.F. Transformer.	
T2	2nd I.F. Transformer.	
L2	Detector Coil Assembly.	
L3	Oscillator Coil Assembly.	

CONDENSERS

C5	.00025 MFD. (or 22-1666) 500 V.	
C6	.01 MFD. 600 V.	
C16	.02 MFD. 200 V.	
C14	.02 MFD. 200 V.	
C15	150 MFD. (or 22-1675) 500 V.	
C2	.1 MFD. 200 V.	
CX	.05 MFD. 200 V.	
CY	.05 MFD. 200 V.	
CZ	.05 MFD. 400 V.	
C17	.01 MFD. 400 V.	
C1, 7, 8	Single Section Trimmer (use with 22-1352)	
C1	Three Gang Variable (or 22-1352)	
C18, 19, 20, 21	Four Section Electrolytic 20-10V. 150V. x 200 MFD.	
C2	2.2 MFD. Ceramic 500 V.	

RESISTORS

R6, 10	Two Section Candohm	
R8	75 ohm W. W. (Insulated) .2 W.	
R2	Volume Control.	
R6	220 ohm (Insulated) .2 W.	
R5	330 ohm (Insulated) .2 W.	
R16	680 ohm (Insulated) .2 W.	
R11	1500 ohm (Insulated) .2 W.	
R18	2200 ohm (Insulated) .2 W.	
R13	9200 ohm (Insulated) .2 W.	
R2	10 K ohm (Insulated) .2 W.	
R3	47 K ohm (Insulated) .2 W.	
R4	180 K ohm (Insulated) .2 W.	
R14	1 Megohm (Insulated) .2 W.	
R7	2.2 Megohm (Insulated) .2 W.	
R17	3.3 Megohm (Insulated) .2 W.	
R1	4.7 Megohm (Insulated) .2 W.	
R3	10 Megohm (Insulated) .2 W.	

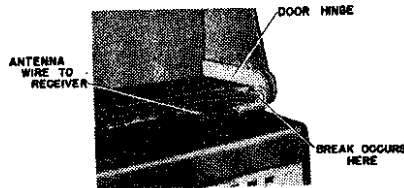
Zenith 4G800 Chassis 4E41

This model appears in *Volume XVII of Rider's Manuals, pages 17-1 and 17-2*. The On-Off switch #85-433 does not completely break contact on some receivers when the lid is closed, causing battery drain. To correct this condition, saw one plastic switch knob 46-736 into 1/16" lengths and place a length on the switch shaft, and then replace the knob. This will force the switch down far enough when the lid is closed to break contact and disconnect the batteries.

In some cases the calibration pointer touches the metal front of the cabinet, thus putting the gang at an a-c potential and causing a hum. To correct this condition place a fibre washer #93-323 between the pointer and the metal dial front. This fibre washer between the metal front panel and the dial pointer, completely prevents this "shorting" condition.

In very rare cases, when hum is encountered and cannot be corrected in any other manner, changing the 1S5 tube is suggested.

On later production runs the 3Q4 tube was replaced with a 3V4 tube. The circuit remains the same in this case. However, the wiring to the tube base has been altered. The 3Q4 is not interchangeable with the 3V4 because of socket connections.



Enough extra lead length should be left when replacing the wavemagnet lead on the Zenith 4G800 so that a break does not occur at the point indicated.

In some cases when the front lid of the receiver is open, the receiver will cut in and out or sometimes be entirely dead. The wire from the wavemagnet to the front door hinge may break at the hinge connection. To correct this condition, remove the handle and resolder these leads, being quite certain that solder is not allowed to run back on the antenna lead and that enough extra antenna lead is allowed for flexing to prevent breakage when the door is open as illustrated in the accompanying diagram.

Zenith 6G801, Chassis 6E40

This model appears in *Rider's Volume XVIII, pages 18-7, 18-8, and 18-10*. In some cases when microphonics are encountered they can be eliminated by replacing one or more of the tubes. The offending tube can be located by turning the set on with the volume advanced and the set tuned to an off-station position. Then gently tap each tube, the one emitting the loudest "ping" is the defective item.

Zenith 8H023, 8H034, Chassis 8C01

These models appear on *pages 15-71 to 15-74 of Rider's Volume XV*. The rushing noise that occurs when the volume control is turned to minimum is caused by a poor connection from the grid element to the grid cap of the 6S8GT tube. A hot iron and a little flux on the grid cap will remove the high-resistance solder joint.

If the f-m oscillator drifts, check for a red dot on the oscillator tuning-slug wire. If the wire is unmarked, replace with one which has a red dot. If the receiver flutters on f.m., this may be cured by installing a 22-1635, 20- μ f, 150-V capacitor and two 1/4-watt resistors, 63-583, 1000 ohms, and 63-600, 2.2 Megohms, as indicated in the accompanying diagram.

